

Claims

1. Method for determining a path between a first (MN11) and a second (AP) radio station of a radio communications system,
 - with the radio communications system comprising, in addition to the first (MN11) and the second (AP) radio station, one or more additional radio stations (MN10, MN12, MN13, MN20, MN21, MN22, MN23, MN24, MN30, MN31),
 - with a frequency band subdivided into a number of subbands being used for communication between the radio stations,
 - with at least one subband for communication being assigned to the radio stations,
 - with the path extending over one or more of the additional radio stations (MN12, MN21, MN23; MN10, MN13, MN20, MN23) so that the information can be transmitted over the path between the first (MN11) and the second (AP) radio station,
 - with the path being at least partially determined by a radio installation (BS) on request of the first radio station (MN11)
 - with the radio installation (BS) transmitting at least the path identification information to the first radio station (MN11),
 - with the radio installation (BS) in each case transmitting to at least a part of the radio stations (MN12, MN21, MN23; MN10, MN20) of the path:
 - the path identification information and
 - the radio station identification information from at least one other radio station of the path and/or from the first (MN11) and/or the second (AP) radio station and
 - the subband information about at least one subband assigned to the at least one radio station

corresponding to the radio station identification information.

2. Method according to claim 1,
characterized in that,
the radio installation (BS)

- of the first radio station (MN11) in addition transmits
 - the radio station identification information of the radio station (MN12) of the path adjacent to it in the path direction from the first (MN11) to the second (AP) radio station (MN11)
 - the subband information about at least one subband assigned to this neighboring radio station (MN12) and
- each radio station (MN12, MN21, MN23) of the path transmits
 - the path identification information,
 - the radio station identification information of the radio station (MN21, MN23) of the path adjacent to it in the path direction from the first (MN11) to the second (AP) radio station or in the case of the last radio station (MN23) of the path of the second (AP) radio station in the path direction from the first (MN11) to the second (AP) radio station, and
 - the subband information about at least one subband assigned to this neighboring radio station (MN21, MN23, AP).

3. Method according to claim 2,
characterized in that,

the radio installation (BS) of each radio station (MN12, MN21, MN23) of the path in addition transmits

- the radio station identification information of the radio station (MN12, MN21) of the path adjacent to it in the path direction from the second (AP) to the first (MN11)

radio station or in the case of the last radio station (MN12) of the path of the first radio station (MN11) in the path direction from the second (AP) to the first (MN11) radio station, and

- the subband information about at least one subband assigned to this neighboring radio station (MN11, MN12, MN21).

4. Method according to one of the claims 1 to 3, characterized in that, the radio installation (BS) transmits at least path identification information to the second radio station (AP).

5. Method according to claim 4, characterized in that, the radio installation (BS) of the second radio station (AP) in addition transmits

- the radio station identification information of the radio station (MN23) of the path adjacent to it in the path direction from the second (AP) to the first (MN11) radio station and
- the subband information about at least one subband assigned to this neighboring radio station (MN23) of the path.

6. Method according to claim 1, characterized in that, the radio stations of the radio communications system are combined into groups (G1, G2, G3) and the radio stations (MN10, MN20) of the part of the radio stations of the path, which transmits the path identification information, the radio station identification information and the subband information to the radio installation (BS), in each case belong to a different group (G1, G2).

7. Method according to claim 6,
characterized in that,
the radio station identification information and the subband
information transmitted to the radio station or the radio
stations (MN10, MN20) of the part of the radio stations
- refer to the next radio station (MN20) of the part of the
radio stations in the path direction from the first
(MN11) to the second (AP) radio station or
 - in the case of the last radio station (MN20) of the part
of the radio station in the path direction from the first
(MN11) to the second (AP) radio station refer to the
second radio station (AP).
8. Method according to claim 7,
characterized in that,
the radio station identification information and the subband
information transmitted to the radio station or the radio
stations (MN10, MN20) of the part of the radio stations
in addition
- refer to the next radio station (MN10) of the part of the
radio stations in the path direction from the second (AP)
to the first (MN11) radio station or
 - in the case of the last radio station (MN10) of the part
of the radio stations in the path direction from the
second (AP) to the first (MN11) radio station refer to
the first radio station (MN11).
9. Method according to one of the claims 6 to 8,
characterized in that,
at least one radio station (MN10, MN20) of the part of the
radio stations forwards the path information and/or the
radio station identification information and/or the subband
information transmitted to it by the radio installation (BS)
to at least one radio station (MN13, MN23) of its group (G1,

G2), to which no path identification information, radio station identification information and subband information has been transmitted by the radio installation (BS).

10. Method according to one of the claims 1 to 9, characterized in that,
the radio installation (BS) assigns at least one subband to the first radio station (MN11) and/or the second (AP) radio station and/or at least one radio station (MN12, MN21, MN23; MN10, MN20) of the path when transmitting the path identification information.
11. Radio installation (BS) with
 - means (M1) for storing the neighboring relationships between the radio stations (AP, MN10, MN11, MN12, MN13, MN20, MN21, MN22, MN23, MN24, MN30, MN31) of a radio communications system,
 - means (M2) for the respective assignment of subbands of a frequency band used for communication between the radio stations to at least one part of the radio stations,
 - means (M3) for storing the information about the subbands assigned to the radio stations,
 - means (M4) for determining at least the parts of a path between a first (MN11) and a second (AP) radio station on request, whereby the path extends over one or more of the additional radio stations (MN12, MN21, MN23; MN10, MN13, MN20, MN23) so that the information can be transmitted over the path between the first (MN11) and the second (AP) radio station,
 - means (M5) for transmitting the information to at least one radio station of the path, comprising
 - the path identification information of the specific path,
 - the radio station identification information from at

least another radio station of the path or the second radio station (AP), and

- the subband information about at least one subband assigned to the at least one radio station corresponding to the radio station identification information.